

Bunsen tube will, in this case, burn with the aid of external heat; but not without some such assistance, because the heat of combustion is so much absorbed by the diluting gases that the temperature of ignition would not otherwise be maintained.

The experiment reminds one of the burning of ammonia, and of a coal-gas flame rendered non-luminous by the admission of steam.

A consideration of Prof. Smithells' method of cone separation by a glass rod (*vide* NATURE, November 1892) might lead to the suspicion that the obstruction of the rod played some part in the phenomenon, but the above explanation is supported by the fact that the copper wire which, when cold, extinguishes a candle flame, does not, when warm, do so.

HERBERT KING.

The School, Wolverhampton, November 2.

The Colours of Guillemots' Eggs.

I AM glad to see that my friend Captain Barrett-Hamilton has written on the above subject, though it seems inconceivable to him that "the beautiful varieties of colouring must help each bird to distinguish her egg from others lying near until they all become stained and soiled." The quotation is from "The Birds of Ireland" (p. 364), in which I put forward, as an opinion, the conclusion that I have been led to after many a day spent in climbing among breeding guillemots.

Discussion of such opinions is to be welcomed, but they must be tested by close observation of the birds and their ways; and the guillemot finding its own egg among many is not the same thing as an animal finding its young, which has voice, smell, movement and expression, nor has the guillemot a nest to find.

It is asked, "Why should each guillemot be provided with a conspicuous private egg-pattern when other sea-birds, her neighbours, have to find their homes without such aid?"

Well, let anyone look down on a guillemot-ledge the last week in May, before the birds have begun to sit close, and he will be struck by the fact that each is provided with a conspicuous egg-pattern, the green eggs contrasting with the white ones and those heavily blotched with the streaked ones; and this is most obvious, even at some distance. I know no other eggs that show such vivid contrasts.

Does this contrast supply any want that the guillemot may have above other birds to enable it to find its egg? Her neighbours, my friend remarks, find their homes without such aid. But then each has her "home." The gulls and cormorants have their nests. Each puffin has its burrow. The razorbills lay much more in separate nooks than guillemots, but still they approach nearest to them both in the nature of their breeding places and in the varieties of egg-colouring. But guillemots lay and sit in packs, often touching one another, on open surfaces of rock (see the plate, "Birds of Ireland," facing p. 362). At first the eggs are often left uncovered and other guillemots alight, lay beside them, and they roll more or less. Must not the special colouring greatly enable the parent bird to find her egg while this is going on? Why should we deny her intelligence in a matter that concerns her, even though other birds are satisfied if they know the way to their nests and do not seem to distinguish whether the eggs in them are their own or not. Thus the cuckoo's egg is unquestioningly accepted by the foster-mother.

It is objected that my suggestion about the colour helping guillemots to distinguish their eggs is disproved by the subsequent admission that they all become stained and soiled as incubation advances; but at that stage each bird clings to her treasure and never leaves it, unless her mate relieves her (a point which needs proof).

The colouring of the eggs of this species is not protective, for it makes them gaudy. It is peculiar, and why should it not be useful during laying-time considering the very peculiar conditions under which guillemots breed? They sometimes come down with a thump among others which are hatching, they sometimes fight, they are awkward on their feet; eggs are not only moved, but many are thrown down, broken or lost in pools.

I wish some ornithologist would contrast from observation the guillemots' colonies on surfaces of rock with those of other birds that breed in packs without nests. Penguins appear to lay on earth and leave lanes between the nesting-places on which the birds travel on foot. That being so, their eggs would not be in such danger of being rolled about.

Cappagh, co. Waterford.

R. J. USSHER.

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THE TERCENTENARY OF TYCHO BRAHE'S DEATH.

ON October 24, 300 years had elapsed since Tycho Brahe died at Prague, expressing in his last moments the hope that he might not appear to have lived in vain. When saying this he doubtless did not fear that the work he had accomplished might not turn out to be of permanent value, but merely regretted that the great goal he had looked forward to from his early youth, the complete reformation of astronomy, had not yet been fully reached. Could he have foreseen how brilliantly Kepler, who stood at his deathbed, was to complete the work, Tycho would have had no fear as to the lasting nature of his reputation.

It is difficult nowadays to realise that only a little more than 300 years ago it was not a self-evident proposition that the science of astronomy could only be firmly established by observing the heavens systematically year after year, and not merely by taking an odd observation now and then. And yet this does not appear to have occurred to anybody before Tycho, as even Copernicus records very few observations taken during his long life, so that the values of most astronomical quantities had still to be borrowed from Ptolemy. But in August 1563 the young Danish noble, then a student at the University of Leipzig, only sixteen years of age, commenced the series of observations which he carried on, with few interruptions, till the end of his life, thirty-eight years later. The instruments he used at first were crude enough, but already at that time the future reformer of practical astronomy was aware that a very inferior instrument may produce good work if all sources of possible errors are investigated and corresponding corrections are applied to the results of the observations. It is also worth noticing that the planets almost from the beginning claimed his undivided attention, so that the youthful observer had perceived that the existing planetary tables could only be improved if the computed places of the planets were systematically compared with observed places and the errors of the tables thus brought to light. Thanks to the great liberality of King Frederic II. of Denmark, Tycho was afterwards able for more than twenty years, with a multitude of instruments of improved construction and assisted by a number of pupils, to follow the motions of the sun, moon and planets, while he at the same time, by his observations of a thousand fixed stars, gave to the world a catalogue of accurate positions of these bodies which took the place of the old catalogue of Ptolemy and held its own for more than a hundred years, until the use of telescopes and clocks of precision enabled Flamsteed to produce much better star places.

That Kepler made use of Tycho Brahe's observations to find the laws which govern the planetary motions and thereby to free the Copernican system from the excentric circles and epicycles which it had taken over from the Ptolemaean system is too well known to require repetition here. But Tycho did a great deal more than merely amassing materials for his successor. Not only was he the first observer who did not assume his instruments to be faultless but who studied their errors of construction, but he was also the first to investigate refraction and to attempt to correct his observations for it, and he succeeded in improving his instruments so much that it is difficult to see how a much greater accuracy could have been attained by succeeding generations, if the telescope had not been invented a few years after his death and if the application of the pendulum to clocks had not simplified many methods of observing. And Tycho was able to deduce many important results from his own observations. By showing that the comets

¹ "Tychoonis Brahe Dani die xxiv Octobris A.D. MDCL defuncti operum primitias De Nova Stella summi civis memor denuo editit Regia Societas Scientiarum Danica. Hauniae, die xxiv Octobris A.D. MDCCCLII." Pp. 16 + 54 ff. + pp. 30; 2 plate.

observed by him, had at most a very small parallax he proved that they were celestial bodies and not mere phenomena in the earth's atmosphere. Important as this discovery was, it is quite eclipsed by the splendour of Tycho's discoveries with regard to the motion of the moon. The ancients knew that the moon's orbit forms an angle of about 5° with the ecliptic, that the two points of intersection (the nodes) travel round the ecliptic in the direction from east to west in about nineteen years, also that the earth is not at the centre of the lunar orbit, and that the line of apsides completes a revolution (from west to east) in less than nine years. The great perturbation in longitude now known as the evection, by which the place of the moon may be put forward or backward as much as $1^\circ 16'$, was also known, having been dimly perceived by Hipparchus and clearly demonstrated by Ptolemy. But since his time no advance had been made (Sédillot's assertion that Abul Wefa discovered the variation has been clearly and finally disproved). The accurate and long-continued observations of Tycho Brahe revealed the existence of another inequality in longitude, known as the variation, which affects the place of the moon to the extent of $40'$, by which amount the moon is ahead of her mean place about three and a half days after new and full moon, and as much behind it about three and a half days after the first and last quarters. He also found the annual equation or the lengthening of the moon's period of revolution in winter and its shortening in summer. Finally, Tycho discovered the variation of the inclination of the lunar orbit and the irregularity of the motion of the nodes. After this series of brilliant successes he cannot have doubted that his observations were destined to reveal the mysteries of planetary motion, and already in 1591 he had commenced to suspect the existence of unknown complications in the motion of Mars, which he afterwards alluded to in a letter to Kepler in 1598, in which he stated that the epicycle of Mars appeared to vary in size. Preparations had already been made for commencing the discussion of the observations of the planets, when an early death closed the life-work of Tycho and obliged him to leave the completion of it to Kepler.

The 300th anniversary of Tycho Brahe's death has been celebrated in his native land by a festive meeting of the Academy of Science at which the venerable King Christian was present, and at which orations were delivered setting forth the importance of Tycho's scientific work. At Prague, where he died, the monument over his recently restored tomb in the Teyn Church was again unveiled, and the interest which the citizens of Prague have always shown in the illustrious exile was manifested in various ways. But though Tycho towards the end of his life felt himself neglected in Denmark and left the country in order to enjoy the society of learned and congenial minds elsewhere, he never forgot the land of his ancestors and his birth, and on the titles of his last writings, as on his first, he describes himself as "Tycho Brahe Danus."

The Copenhagen Academy has chosen a very fitting way of doing honour to the memory of the greatest scientific man Denmark has produced by publishing a facsimile reprint of his earliest publication, "*De nova stella*" (1573). Tycho's four principal works are found in all great libraries and are not unfrequently met with in the lists of second-hand booksellers. But the book on the splendid new star which appeared in Cassiopeia in November 1572 is so extremely scarce that not a single historian of astronomy had ever seen it or even been able to give the title correctly until the writer of these lines gave an account of it in 1890. Tycho says himself that not many copies were printed and only a few were sent abroad, for which reason he afterwards reprinted the more important parts of it in his larger work, "*Astronomiæ Instauratæ Progymnasmata*," on which he was engaged during the last fourteen years of his life and which was

published after his death. But the whole of the original book, as it left the hand of the young author, is of great historical interest, and we are glad to see the fine reprint now issued, as the star of 1572 was so intimately connected with the progress of Tycho's work.

In a short Latin preface and a Danish postscript of thirty pages, M. Pechüle, of the Copenhagen Observatory, has given a short summary of the origin and contents of the book. Tycho's manuscript was an astronomical, astrological and meteorological almanac for the year 1573, in which he, after a lengthy introduction (to the almanac proper), had inserted his essay on the new star, another on the lunar eclipse of December 1573 and a poem to Urania. After a good deal of persuasion by several friends, Tycho allowed the book to be printed in the spring of 1573, omitting, however, the main part of the almanac. It contains 53 ff., and has now been exactly reproduced in facsimile, but it has been collated with a MS. copy partly written in Tycho's own hand and preserved in the Imperial library at Vienna, in which way a few corrigenda were noticed which are given at the end of the reprint. The book, which is beautifully got up, also contains a specimen of Tycho's handwriting and a copy of a very fine portrait, drawn with pen and ink, found in the Royal collection of engravings at Copenhagen and by some ascribed to the Dutch engraver Goltzius, by others to the painter Gemperlin of Augsburg, who came to Denmark with Tycho in 1575 and afterwards painted the well-known portrait on his mural quadrant. To anyone acquainted with the contemporary literature on the new star and on comets this book will be of great interest, as it gives a very sober account of the startling celestial phenomenon which had given rise to a host of more or less worthless pamphlets and books, and shows that the want of parallax and motion proves the star to belong to the region of the fixed stars. At the same time, it is interesting to see that the author, who was destined afterwards to give the death-blow to the Aristotelean idea of the atmospheric origin of comets, was still a believer in this doctrine when he wrote his first book, but also that he was already then thoroughly aware that the great desideratum of astronomy was an extensive series of observations which he hoped to be able to supply if health permitted and the necessary means were granted him.

Scania, the province east of the Sound, where Tycho was born, and the little island of Hveen, on which his observatory stood, formed parts of the kingdom of Denmark from before the dawn of history and till 1658, when they were torn from the country which had not sufficiently valued him and incorporated in Sweden. It is therefore natural that the recent anniversary of his death also attracted attention in Sweden, and in honour of the day the Physiographic Society of Lund has published a *Festskrift* (20 pp., 4to., with three plates), in which Prof. Charlier, of Lund, gives an account of the recent exploration of the scanty remains of Tycho's buildings on the island. The foundations of Uraniburg were laid bare, as also the floors of the half-subterranean observatory (Stellæburgum (Stjerneborg)), but scarcely anything was found more than what the clergyman Ekdahl unearthed in 1823. It has repeatedly, in 1823, in 1868 after the examination of the site by d'Arrest, and now again on the present occasion, been pointed out that "something ought to be done" to protect the ruins from wind and weather, and we may add from relic-hunters also. If this was desirable formerly, when Hveen was a lonely place to which nobody ever went, it has become infinitely more important now, as the island seems to have become the common resort of Sunday trippers from both shores of the Sound, and it would certainly be safer to cover up the foundations again than to leave them unprotected. It has recently been suggested that the observatory might easily be rebuilt from Tycho's detailed and

illustrated description and on the existing foundations and floors of the crypts, and no doubt this would be quite possible. But we confess we should prefer to see a large shed erected over the few stones that are left so that these venerable ruins could remain undisturbed. Most people would prefer looking at the ruins of Kenilworth Castle to walking through a sham castle erected on them and absorbing them. J. L. E. DREYER.

CELEBRATION AT PRAGUE.

Representatives of Bohemian science have recently shown that they delight to remember that Tycho Brahe, the great pioneer of modern observational astronomy, spent the last two years of his scientific activity in the capital of the Bohemian kingdom at a time when, as a seat of the Imperial Court of Rudolph II., the city was one of the most prominent centres of western European culture. It was at Prague that Tycho (Danish, Tyge) Brahe died on October 24, 1601.

The municipal council of Prague took part in the recent celebration, which excited much interest and received a large share of attention in the daily Press.

We cannot give here a detailed account of the scientific career of the great astronomer, but an outline will be of interest. Frederic II. of Denmark gave Tycho means for building the splendid observatory of Uraniburg, but after the death of his royal supporter Tycho was obliged to leave Denmark and his observatory, together with its valuable astronomical instruments.

Tycho went to his friend Count Rantzau at Wandsbeck in 1597 and two years later to the Court of the Emperor Rudolph II. at Prague. But the life at this Court was much too distracting for a scientific worker like Tycho, so he removed to the Imperial castle of New Benatky, where he founded an astronomical observatory. The brass-wire line on the floor, representing the meridian, still exists and is shown as a relic of the observatory. There was also a chemical laboratory, in which Tycho worked.

In the year 1600 Tycho Brahe, at the request of the Emperor, again returned to Prague, where, near the Royal Castle on the ground belonging to Curtius, arrangements were made for building an observatory surpassing even that of Uraniburg in character.

Meanwhile a house, "At the Golden Griffin," was provided for him and his family; and his library, together with his twenty-eight astronomical instruments, was removed to the summer-castle of Belvedere, which is named after Tycho even now. Some time afterwards his observatory was removed to the ground of Curtius, where the Czernin barracks are now standing. Here he was assisted in his work by the young mathematician Kepler, who was called by the Emperor to the capital of Bohemia "quoad calculum."

While Tycho was in the midst of his scientific activity he was seized by a sudden illness and after eleven days he died. He was buried in the Teyn Church, and at his grave the learned Bohemian Dr. Iesenius delivered an impressive Latin oration in which he described Tycho's scientific merits and noble character.

The celebration of the 300th anniversary of Tycho's death began at Prague on October 18, where, at a special meeting of the Bohemian Academy of Science, Art and Literature, Prof. Gruss read an address on Tycho's life and scientific influence.

The Royal Bohemian Society of Science celebrated the tercentenary on October 24. In one of the ancient meeting-rooms of the Prague Town Hall an exhibition was held of several Tychonian relics. There was Tycho's magnificent album which was presented by him to his son and is a treasure of antique book-binding; the manuscript, "Triangulorum Planorum et Sphaericorum Praxis Mathematica," a manuscript, "Tychonis Brahe

Otonidis (his father's name) Tabulae Sinuum, 1682"; the memorandum book of Siebold Plan, with an inscription: "Plures sapiunt palato quam cerebro, Tycho Brahe scripsit Uraniburgi, Anno 1591." From Tycho's printed works were exhibited, a copy of Ptolemy's "Almagest," with Tycho's handwriting of 1560; a copy of Copernicus's "De Revolutionibus Orbium Coelestium Libri VI," with Tycho's margin notes; a copy of "Tychonis Brahe Astronomiae Instauratae Mechanica, Wandesbergi, Anno MDIIC," which contains Tycho's signature and a dedication to his friend Baron ab Hasenburg, a book containing *inter alia* extremely interesting coloured pictures of the Uraniburg and of a series of Tycho's astronomical instruments. Several other books from Tycho's library bearing dedications to him were also exhibited. All these objects are described in Prof. Studnička's work, "Prager Tychoniana," of which a notice has appeared in NATURE (vol. lxiii. p. 206). There was also exhibited Tycho's Latin poem on the title-leaf of the book, "Prutænicæ Tabulae Coelestium Motuum Autore Erasmo Reinholdo"; and a celestial globe made by Tycho's pupil, Willem Iansson Blaev, in 1603, and containing the positions of fundamental stars as determined by Tycho. Many photographs of Tychoniana were exhibited; some of them, showing the present state of Uraniburg after recent excavations, were contributed by Prof. Thiele. The books and the globe lent for exhibition were from the monastery of Strahov, the Royal Bohemian Museum, and the Imperial Library of the University.

Among those who attended the celebration were Dr. Thiele, professor of astronomy in the University of Copenhagen and rector of the latter, as a representative of the University and of the Danish Academy of Sciences, with his son and assistant, Holger Thiele; Mr. Harald Mortensen, of Copenhagen; and a great number of representatives of Bohemian science. After visiting the exhibition, the representatives went to the Town Hall, where they were received and greeted by the Mayor of Prague. Prof. Studnička then gave an address of the life and work of Tycho Brahe. The meeting was brought to a close by a few historical remarks by Prof. Tomek, the distinguished historian of the city of Prague and president of the Royal Society of Bohemia.

After this a visit was made to Tycho's tomb and monument in the Teyn Church, opposite the Town Hall. It must be remarked here that this church was partly destroyed by fire in 1675, and that its pavement was restored in 1721. It was therefore doubtful whether Tycho's remains would be found there, especially as, after the battle on the White Berg in 1620, the Teyn Church became a Catholic one and the bodies of persons who had held other beliefs were removed. The municipality of Prague, in view of the anniversary, had this question fully investigated by Profs. Schrutz and Matiegka, and it was found that the brick vault of the tomb had been broken during the catastrophes of the seventeenth and eighteenth centuries and that some earth had fallen in. Two bodies were, however, brought out with the greatest care, and it was recognised by many signs, such as the form of the moustache and the fact that a part of the nose had been cut off and replaced by one of metal (chiefly copper), that the skull undoubtedly belonged to Tycho, whose nose was cut off in a duel in 1566, so that he afterwards wore an artificial nose of metal.

The tomb was put in good order and the remains of Tycho and his wife were placed in a metal coffin and again buried. The grave is covered by a large marble plate bearing the inscription, "Tycho Brahe." The tomb and epitaph are represented in the accompanying reproduction of a photograph. As it appears that one of the authors of the inscription on the epitaph was Kepler, we give it here in its full length:—

"Esse potius quam videri.

Illustris et generosus Dominus Tycho Brahe, Danus,
Dominus in Knudstrup, arcis Uraniburgi in insula

quissima nobilitate clarus, suo auctior animo, quæ-
cunque cœlo continentur, immortalī gloria complexus,
Astronomorum omnis sæculi longē princeps, totius orbis



Tomb, Tombstone and Epitaph of Tycho Brahe at Prague.

Hellesponti Danici Huenna fundator, instrumentorum
astronomicorum qualia nec ante sol vidit, ingeniosissi-
mus idemque liberalissimus inventor et exstructor, anti-
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commodo sumptibus immensis, exactissimas intra minuta
minutorumque partes, triginta amplius annorum obser-
vationes mundo primus intulit; affixa sidera intra minutum

ejusque semissem restituit: Hipparchi solius ab orbe condito vel diis improbos in octava duntaxat gradus parte conatus longissime antegressus: utriusque luminaris cursum exquisitè restauravit, pro reliquis erraticis solidissima *tabularum Rudolphæarum* fundamenta jecit: Mathematicarum rerum peritis inveteratam Aristotelis et assecularum doctrinam de sublunari cometarum novorumque siderum situ, demonstrationibus invictis exemit: novarum hypothesis autor; in Stagyrice et universa philosophia admirandus; evocatus ab invictissimo Romano imperatore *Rudolpho Secundo*, mira doctrinæ et candoris exempla dedit; ne frustra vixisse videretur, immortalitatem, etiam apud Antipodas scriptorum perennitate sibi comparavit; planeque qualis esse quam haberi maluit, nunc vita functus æternum vivit.

Ejus exuvias uxorisque triennio post defunctæ heredes liberi sacro hoc loco composuerunt. Obiit quarto kalend. Novembris anni Christiani Dionysiaci MDCI ætatis suæ LV.

Non fasces, nec opes, sola artis sceptræ perennant." Around the tombstone bearing Tycho's likeness we read: "Anno Domini MDCI die XXIV Octobris obiit illustris et generosus Dominus Tycho Brahe, Dominus in Knudstrup et Præses Uraniburgi et sacræ Cæsareæ Majestatis Consiliarius, Cujus ossa hic requiescunt."

When the visit to Tycho's tomb took place, the Mayor of Prague laid a beautiful wreath upon the tomb which bore the inscription upon ribbons in national colours, "To the great philosopher—the Royal Capital of Prague." Other wreaths bore the inscriptions, "Universitas Hafniensis," "Societas regia scientiarum Danica," "Fra Danske Studenter." There were also wreaths from Prof. Safarik, the Observatory of Prague, and many others from literary and scientific societies.

The visitors afterwards proceeded to a house on the "Fruit Market," where a memorial tablet of marble was placed stating that Kepler lived there from 1604-1607. In the afternoon the Belvedere of Tycho Brahe was visited and a name "Tycho Street" was given to a new street opposite it. The long row of carriages bearing the numerous visitors then proceeded to a quiet street near the now abandoned Royal Castle, and the house "At the Golden Griffin" was shown, having in front a marble tablet stating that Tycho lived there in 1600 and 1601. Finally, the place was visited where Tycho's last observatory formerly stood and where a new street, bearing the name of Kepler, is now situated.

In this way was celebrated the memory of the great astronomer whose work marks a great epoch in that science, and from whose observations his friend and colleague Kepler calculated his well-known laws.

BOHUSLAV BRAUNER.

CELEBRATIONS IN DENMARK AND SWEDEN.

In Copenhagen the Society of Science celebrated the tercentenary of Tycho Brahe's death in the presence of the King and Royal family and all the members of the Society. The meeting was opened with a short address by the president of the Society, Prof. Jul. Thomsen, who announced that Dr. J. L. E. Dreyer, who was born in Denmark, had had the order of Knight of the Dannebrog conferred upon him by the King. Prof. Fridericia gave a lecture on the personality of Tycho Brahe. He pointed out his scientific enthusiasm and his accurate observations, and showed how towards the close of his life he neglected the mystical side of astrology and regarded astronomy more from the physical point of view. The astronomer's statue in the grounds of the Copenhagen Observatory was decked with wreaths and flowers.

At the University of Lund a bust of Tycho Brahe was unveiled. The Stockholm Academy of Science celebrated the event by a memorial festival in the presence of Prince Eugen and several of the ministers, when speeches were delivered by President Odhner and Prof. Dunér.

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STUDIES ON THE ETHNOGRAPHY OF THE NORTH QUEENSLAND ABORIGINES.¹

ANTHROPOLOGISTS so fully recognised the value of Dr. Walter E. Roth's "Ethnological Studies among the North-West-Central Queensland Aborigines" that there was considerable satisfaction when the news arrived a year or two ago of his appointment as Northern Protector of Aborigines in Queensland. We now have the pleasure of receiving two *Bulletins* on North Queensland ethnography, which are the first-fruits of that able investigator's researches in his new sphere, and at the same time we must thank and compliment the Home Secretary's Department in Brisbane for issuing these *Bulletins*, especially as we are promised two or three similar *Bulletins* annually. Dr. Roth expresses his deep indebtedness to the Hon. J. F. G. Foxton for all the kindly encouragement invariably received from him during the prosecution of his scientific labours, and it is due to his wishes, as ministerial head of the Department, that these researches of Dr. Roth's are now being made available to the public. Dr. Roth has anticipated the thanks which anthropologists at home would like to offer to this public-spirited Minister. Publications such as these will do something towards reducing that ignorance of our native races which is largely due to the apathy of our Government as a whole.

The first *Bulletin* consists of an essay by Dr. Roth on "String, and other Forms of Strand: Basketry-, Woven bag- and Net-work." The animal and vegetable products of which strings are made are enumerated, and Mr. F. M. Bailey, the Colonial botanist, has identified the plants from which textiles are made which have been collected by Dr. Roth. The method of making string, including the manufacture of human-hair twine, is fully described and illustrated. Dr. Roth gives in his short direct style accounts of the procedures in which string and other forms of strand are employed. His classification of the processes of construction of basketry, woven bags and network will prove of considerable value to those who have to describe similar textiles from other countries. His explanations are illustrated by nearly a hundred clear diagrams drawn by the author and contained in nineteen plates.

The second *Bulletin* is devoted to the structure of the Koko-Yimdir language, in which Dr. Roth has had the invaluable cooperation of the Revs. G. H. Schwarz and W. Poland, Lutheran missionaries at Cape Bedford Mission Station. This language is spoken from the Annan and Endeavour Rivers to the northern side of Cape Flattery. It is noteworthy that this Koko-Yimdir language is the identical one of which Lieutenant Cook took a vocabulary when visiting the Endeavour River in 1770. A table is given of Cook's words with those in use at the present day; the "kangaroo" of the great voyager is still spoken of as *ganguru*. There are many suggestive notes on the language apart from the interest of the language itself.

We have no doubt that the succeeding numbers will be as valuable as those now to hand, and we shall eagerly await the good things which we are sure Dr. Roth has in store for us.

CHARLES MELDRUM.

DR. CHARLES MELDRUM was born at Kirkmichal, Banffshire, in 1821, and died in Edinburgh in August 1901. He was educated at Aberdeen University, and after graduation as Master of Arts he joined the Bombay Education Department. In 1848 he was appointed professor of mathematics in the Royal College

¹ "North Queensland Ethnography." *Bulletin* No. 1, C.A. 11-1901, price 8s.; No. 2, C.A. 22-1901, price 1s. (Brisbane: by Authority, Edmund Gregory, Government Printer, William Street, 1901.)